

Abstract of the Disclosure

Signal Transducer and Activator of Transcription (STAT) proteins have a fundamental role in cell signaling, and are activated by a large number of cytokines and growth factors. One member of the STAT family, STAT3, has a critical role in oncogenesis. The present invention relates generally to disruption of the pathway of STAT3 signaling in the treatment of human cancer. STAT3 activation is shown to be present in diverse tumor cell lines and tumors, to promote oncogenesis, to inhibit apoptosis, and to reduce sensitivity to chemotherapeutic agents. Inhibition of STAT3 signaling induces apoptosis specifically in tumor cell lines, and increases sensitivity to chemotherapeutic agents. The invention relates more particularly to methods, compositions, means of administering such compositions, and means for identifying such compositions for the inhibition of STAT3 intracellular signaling in the treatment of human cancers.

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